Examiner's convenience, all claims currently pending in this application have been reproduced below:

71. (Amended) A diffractive optical element, which is used for an optical system of an exposure apparatus, said diffractive optical element comprising:

an effective area;

a peripheral area surrounding the effective area; and

a light-shielding member composed of a laminated layer of Cr oxide and Cr on a surface of the peripheral area.

72. (Not Amended) A diffractive optical element according to Claim 71, wherein said light-shielding member comprises an alignment mark.

73. (Not Amended) An exposure apparatus for exposing a wafer to a pattern of a mask by using said optical system including said diffraction grating optical element according to Claim 71.

74. (Not Amended) A device manufacturing method comprising:

a step of exposing a wafer to a device pattern of a mask by the exposure apparatus according to Claim 73; and

a step of developing the exposed wafer.

75. (Amended) A diffractive optical element, which is used for an optical system of an exposure apparatus, said diffractive optical element comprising:

an effective area;

a peripheral area surrounding the effective area; and

a light-shielding member composed of a material selected from the group consisting of TiC, TiN, ZrC, HfC and HfN, on a surface of the peripheral area.

76. (Not Amended) A diffractive optical element according to Claim 75, wherein said light-shielding member comprises an alignment mark.

77. (Not Amended) An exposure apparatus for exposing a wafer to a pattern of a mask by using said optical system including said diffractive optical element according to Claim 75.

78. (Not Amended) A device manufacturing method comprising:

a step of exposing a wafer to a device pattern of a mask by the exposure apparatus according to Claim 77; and

a step of developing the exposed wafer.

79. (Amended) A diffractive optical element, which is used for an optical system of an exposure apparatus, said diffractive optical element comprising:

an effective area;

a peripheral area surrounding the effective area; and

a light-shielding member composed of an acrylic or epoxy light-shielding ink on a surface of the peripheral area, and an alignment mark used when arranging said light-shielding member into said optical system, wherein said light-shielding ink is not exposed to an outside of the diffractive optical element.

80. (Not Amended) An exposure apparatus for exposing a wafer to a pattern of a mask by using said optical system including said diffractive optical element according to Claim 79.

81. (Not Amended) A device manufacturing method comprising:

a step of exposing a wafer to a device pattern of a mask by the exposure apparatus according to Claim 80; and

a step of developing the exposed wafer.

82. (Amended) A diffractive optical element, which is used for an optical system of an exposure apparatus, said diffractive optical element comprising:

an effective area;

a peripheral area surrounding the effective area; and

a light-shielding member composed of any one of (i) chromium, aluminum, molybdenum, tantalum and tungsten, (ii) a laminated structure of any one of chromium, aluminum, molybdenum, tantalum or tungsten and any one of chromium oxide, silicon oxide or aluminum oxide, (iii) a compound material of a metal and silicon, and (iv) a

compound of any one of molybdenum or tungsten and silicon, silicon, or titanium oxide, on a surface of the peripheral area.

83. (Not Amended) A diffractive optical element according to Claim 82, wherein a wavelength of light used for the exposure is less than 250 nm.

84. (Not Amended) An exposure apparatus for exposing a wafer to a pattern of a mask by said optical system including said diffractive optical element according to Claim 82.

85. (Not Amended) A device manufacturing method comprising:

a step of exposing a wafer to a device pattern of a mask by the exposure apparatus according to Claim 84; and

a step of developing the exposed wafer.

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 71-85 are presented for consideration. Claims 71, 75, 79 and 82 have been amended to define more clearly what Applicants regard as their invention in terms which distinguish over the prior art. Claims 71, 75, 79 and 82 are independent. Support for these claims can be found in the original application as filed. Therefore, no new matter has been added.